1125-11 **Percutaneous Coronary Intervention of Complex Lesions Is Associated With Increased In-Hospital and One-Year Adverse Event Rates: Results From the NHLBI Dynamic Registry**

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Background: Advances in coronary intervention (PCI) have reduced complications but expanded indications to include more complex lesions. Methods. We assessed clinical event rates among pts undergoing PCI for complex lesions between 7/97-2/98 and 2/99-6/99. A complex lesion was defined as containing thrombus (Thr) or calcium (Ca), or in a bifurcation (Bif) or ostial (Os) location. Results. Of 4430 total patients, 2582 were treated for complex lesions (58.3%); they were older and more likely to present with an acute coronary syndrome. PCI of a complex lesion was more likely to cause dissection, distal embolization, side branch occlusion or reduced blood flow, resulting in lesser success (91.9% vs 94.0%, p<0.05) and increased in-hospital and 1-yr event rates (Table). After adjusting for clinical, demographic and angiographic characteristics pts with Thr had a greater risk of in-hospital death (D)/MI (Odds ratio [OR] =1.94; 95% CI = 1.32-2.83). Ca (OR 1.38, 95% CI=1.03-1.85) or Bif lesions (OR=1.48 95% CI=1.03-2.12) were independently associated with in-hospital D/MI/CABG. At 1-yr Bif lesions were independently associated with increased D/MI (RR = 1.31; 95% CI = 1.03-1.69) and MACE (RR = 1.33; 95% CI = 1.13-1.57). Conclusions: PCI of complex lesions was associated with increased in-hospital and 1-yr adverse events. The increased in-hospital event rate was noted independently for thrombotic, bifurcation and calcified lesions. Bifurcation lesions were associated with worse long-term event rates.

| | In-hospital | | | One-Year | | |
|---|---|---|---|---|---|---|
| Complex Lesion? | Death+ | Death/MI+ | Death/MI/CABG+ | Death+ | Death/MI* | MACE+ |
| Yes | 2.1% | 5.4% | 6.8% | 6.2% | 11.9% | 27.1% |
| No | 0.7% | 2.3% | 2.9% | 3.8% | 7.5% | 22.7% |

*p<0.01 +p<0.001

1125-12 **Reduced Need for Repeat Revascularization Following Percutaneous Coronary Intervention: A Report From the 1997-1999 NHLBI Dynamic Registry**

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BACKGROUND: The NHLBI Dynamic Registry was established in 1997 to identify changes over time in the practice of percutaneous coronary intervention (PCI). This report focuses on patient outcomes during the year following PCI.
METHODS: The design of the Dynamic Registry includes three enrollment waves of approximately 2000 patients each, separated by 18 month intervals. Wave 1 (July 1997 - February 1998) included 15 sites and Wave 2 (February - June 1999) included 16 sites. Patients were contacted by phone one year after the index PCI and clinical data including dates of major cardiac events were recorded. One year event rates were calculated using the Kaplan-Meier method and compared with the log rank test. Cox regression was used to calculate adjusted risk ratios.
RESULTS: One year event rates for death, myocardial infarction (MI), and coronary artery bypass grafting (CABG) were similar between the two waves. However, the one year repeat PCI rate decreased by approximately 20% from Wave 1 to Wave 2. This difference remained after adjusting for differences in patient risk factors and lesion characteristics (adjusted RR = 0.80, 95% CI = 0.67 - 0.96). Increased use of stents (Wave 1: 67%; Wave 2: 79%;p<0.001) and cardiac medication (see table) may have an effect on the need for repeat PCI.
CONCLUSIONS: One year event rates for death, MI, and CABG following PCI were similar between the two waves; however, the rate for repeat PCI declined. Changes in treatment strategies may be responsible for some of this decline.

| | Wave 1 (N=2524) | Wave 2 (N=1904) | p-value |
|---|---|---|---|
| One Year Events | # Events (%) | # Events (%) | |
| Death | 111 (5.1) | 95 (5.4) | 0.668 |
| MI | 125 (5.5) | 107 (5.9) | 0.525. |
| CABG | 156 (7.3) | 108 (6.2) | 0.182 |
| Repeat PCI | 303 (14.7) | 206 (12.1) | 0.015 |
| Death/MI | 220 (9.8) | 187 (10.4) | 0.495 |
| Death/MI/CABG | 352 (15.8) | 274 (15.2) | 0.682 |
| Repeat PCI/CABG | 425 (20.3) | 288 (16.8) | 0.004 |
| Cardiac Medication | | | |
| GP IIb/IIIa | 24% | 32% | <0.001 |
| ACE Inhibitors | 30% | 37% | <0.001 |
| Beta Blockers | 65% | 70% | <0.001 |
| Statins | 46% | 62% | <0.001 |

POSTER SESSION

## 1126 Stents: Patient and Lesion Subgroups

Monday, March 18, 2002, 3:00 p.m.-5:00 p.m.
Georgia World Congress Center, Hall G
Presentation Hour: 3:00 p.m.-4:00 p.m.

1126-13 **Should Follow-Up Angiography Be Routine in Asymptomatic Patients After Stenting of Unprotected Left Main Coronary Stenosis?**

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**Background:** Selected patients with unprotected left main coronary artery (ULMCA) stenosis can safely undergo stenting. Clinical restenosis after stenting of ULMCA occurs in 8-15%. Earlier studies predominantly utilizing non-stent devices revealed ≈10% incidence of death at follow-up, perhaps due to rapidly progressive restenosis. This led to recommending routine angiography at 3-4 months after ULMCA intervention. However, its practical utility after ULMCA stenting is controversial. We present complete one-year follow-up of first 100 consecutive high-risk cases of ULMCA stenting deemed unsuitable for CABG.
**Methods:** Baseline: mean age 82±6 yrs, female 42%, mean LVEF 31±14%, GP inhibitors in 76%, and elective IABP in 34%. Stenosis location: ostium in 25%, body/distal in 60%, and bifurcation in 15%. All patients underwent stenting, 89% after rotablation.
**Results:** Procedure was successful in all patients without any major in-hospital complications. Vascular complications occurred in 3%. Mean reference vessel diameter was 3.81±0.81 mm, MLD pre-procedure 1.12±0.36 mm and post-procedure 3.67±0.52 mm. CK-MB elevation occurred in 21%, with >5x normal in 4%. All patients were discharged alive at a mean duration of 6±5 days. At one-year follow-up there have been 14 deaths: 7 cardiac (4 CHF, 1 MI, 1 arrhythmia, 1 stent thrombosis), 7 non-cardiac (3 CVA, 2 pneumonia, 1 hyperkaliemia, 1 neoplasm). A total of 12 patients (12%) required repeat intervention for recurrence of angina, heart failure, or positive non-invasive testing. On multivariate analysis, bifurcation lesion intervention (OR 4.2; 95% CI 2.2-6.8) and diabetes (OR 2.4; 95% CI 1.8-3.2) were independent predictors of restenosis. No patients underwent CABG or had sudden death at follow-up. Protocol mandated angiography was done in 22 asymptomatic patients and none had >70% stenosis of LMCA.
**Conclusion:** Present prospective careful observation suggests that ULMCA in-stent restenosis always manifests clinically. Extremely low incidence of sudden death at follow-up may obviate the need of routine follow-up angiography in these high-risk ULMCA patients. Whether this observation can be generalized to all ULMCA patients needs to be determined.

1126-14 **Frequency and Causes of Early Hospital Readmission for Chest Pain After Contemporary Coronary Stent Implantation**

Dusan Knezevic, Jeffrey Moses, Zoran Lasic, Yan Li, Roberta Maida, Vladimir Ilic, David Bolon, Maja Zaric, Asu Rustemli, Ali Aboufares, Neil Coplan, George Dangas, Issam Moussa, *Lenox Hill Heart & Vascular Institute, New York, New York, Cardiovascular Research Fondation, New York, New York.*

**Background:** Stents greatly improved the safety of percutaneous coronary intervention (PCI) and diminished early complications. However the frequency and causes of early hospital readmission for chest pain following successful contemporary coronary stenting have not been well described.
**Methods and results:** This study consisted of 1782 patients who had successful stent implantation in Lenox Hill Hospital and underwent a 30-day follow up. Of this population, 71 patients (4.2%) were readmitted due to chest pain. This group, compared to patients who were not readmitted, had a higher prevalence of cigarette smoking (34% vs.18%, p<0.001) and a lower prevalence of hypertension (61% vs. 72%, p<0.05). Only 10 patients (14%) had ischemic ECG changes. Repeat target vessel revascularization was necessary in 13 patients (0.7%). This was due to stent thrombosis in two patients (0.1%) and to residual dissections or suboptimal results in 11 patients (0.6%).
**Conclusion:** In this era of coronary stent implantation, a minority of patients is readmitted due to chest pain after successful stenting. Further, repeat revascularization is required in only a small percentage of patients (0.7%). Therefore, more stringent criteria, such as the presence of ischemic ECG changes or positive cardiac markers, should be applied prior to repeat angiography in these patients.

1126-15 **Long-Term Clinical Follow-Up After Unprotected Left Main Coronary Artery Stenting: Predictors of Mortality**

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**Background:** Unprotected left main coronary artery (LMCA) stenting has been proposed as an alternative to coronary artery bypass surgery (CABG) in selected patients. However, experience is limited and further information regarding initial and long term follow-up is required. **Methods:**We report acute and follow up data (764±650 days) of 179 consecutive pts that underwent unprotected LMCA stenting. **Results:** Procedure was successfully achieved in all pts. In-hospital MACE were 8.3%, mortality was 3.9%, non fatal MI 3.9%, TLR 0.5%. By Kaplan Meier analysis (KMA) 3 years survival is 77.7± 0.49 % (mean±SEE) and freedom from Death, MI and TLR is 67.2 ±0.43%. Univariate predictors of death are: LVEF(59±14 VS 48±15 %; p<0.0001), Stent length(14 ±5VS16±4 mm; p=0.02), Final Stent diam.(4±0.5 VS 3.8±0.4 mm; p= 0.03), Number of lesion treated (>2; p=0.03), Poor distal run off (p=0.003). By multivariate logistic regression LVEF [p< 0.0001 (95% CI 0.903-0.968)] and Poor distal Run off [p= 0.005 (95 %CI 0.21-0.49)] are